Guided Missile Frigate (FFG 62) Update Sea Air Space

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PMS 515

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Guided Missile Frigate (FFG 62)
Program Description

Mission:

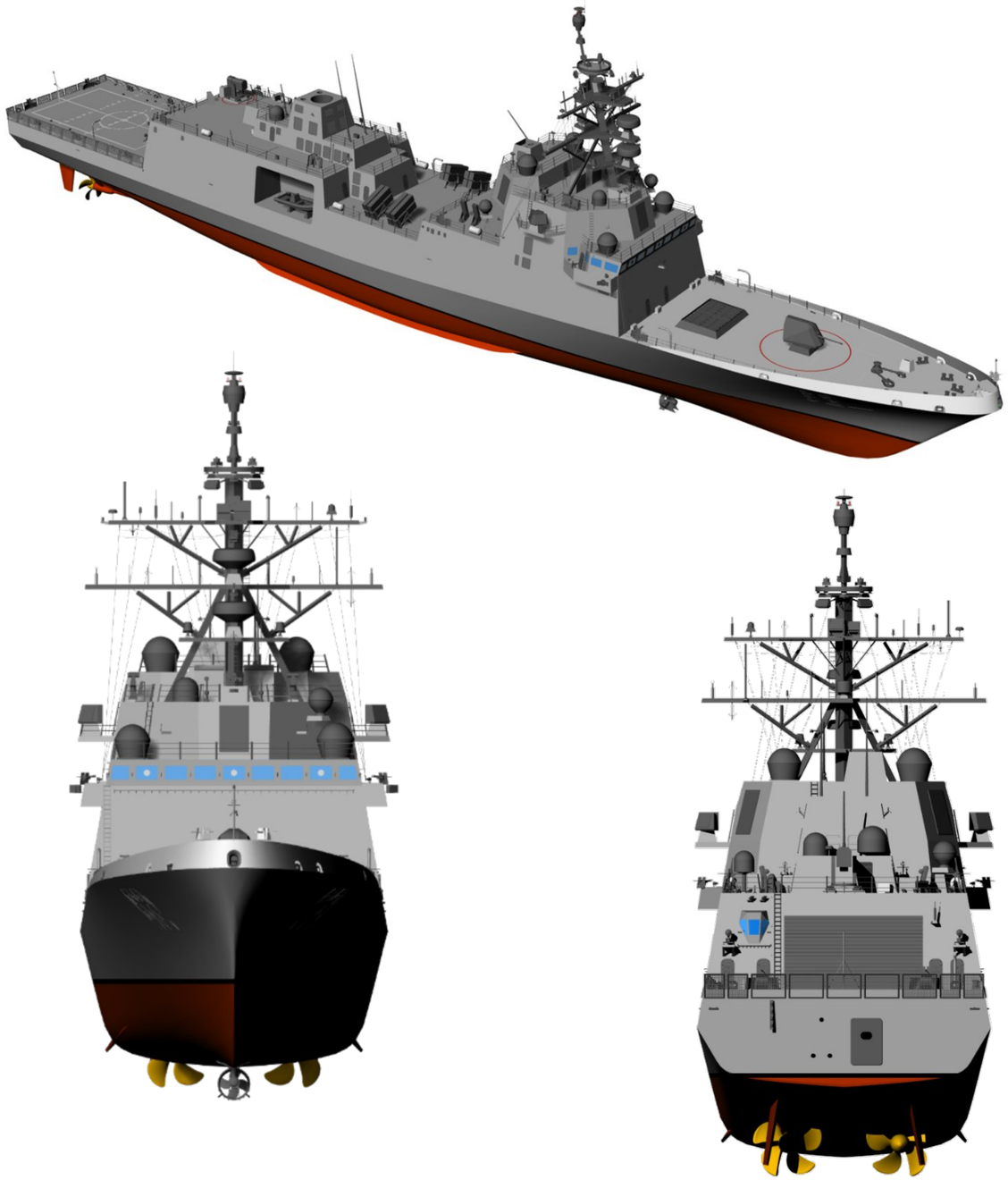
Anti-Submarine Warfare, Surface Warfare, Electromagnetic Maneuver Warfare, and Air Warfare

Description:

FFG 62 is an agile, multi-mission platform designed for operation in littoral and blue water environments

Employment:

Operate independently or integrated with a Task Force to conduct offensive and defensive Surface, Anti-Submarine, and Air Warfare



Program Focus

- **Ship Acquisition Focus:**

✓ *Start of Construction of the lead ship CONSTELLATION (FFG 62) on 31 August 2022*

→ *Three ships awarded to Fincantieri to include the CONSTELLATION (FFG 62) in 2020, the CONGRESS (FFG 63) in 2021, and the CHESAPEAKE (FFG 64) in 2022*

→ Capital Improvements at Marinette Marine main yard will be complete in 2023 (blast & paint expansion and ship lift remain)

→ Industrial Base & Workforce Development efforts in 2023

→ Awarding fourth ship FFG 65 (ship name TBD) in 2023

- **Risk Reduction Focus:**

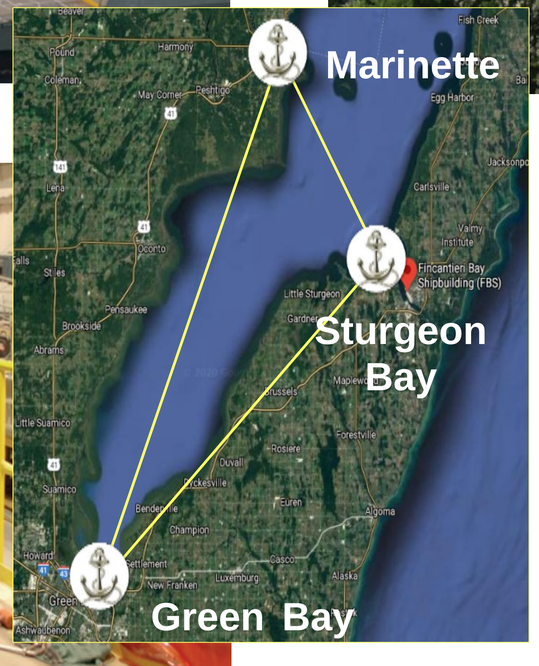
✓ *Completed Advanced Construction Pilot and incorporated lessons learned prior to start of construction of the FFG 62*

→ AEGIS Combat System development & integration activities at CSEDS Moorestown NJ and SCSC Wallops VA in 2023

→ Propulsion Land Based Engineering Site (LBES) plant in NSWC Philadelphia to include demolition & repair activities in 2023

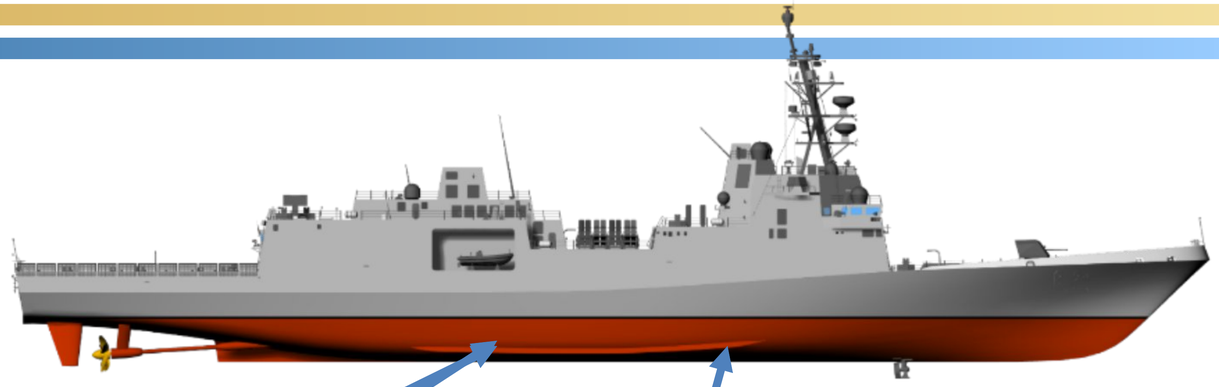
→ Machinery Control System labs & fly-away kits for early integration

Production Readiness (People, Process, Product): Fincantieri Production Plan – System of Yards



Fincantieri Marine Group (FMG)
Shipyard Capital Improvements

CONSTELLATION (FFG 62)
Production Progress



Risk Reduction via Early Integration Test: Land and At-Sea Integration Testing

C4I

HM&E

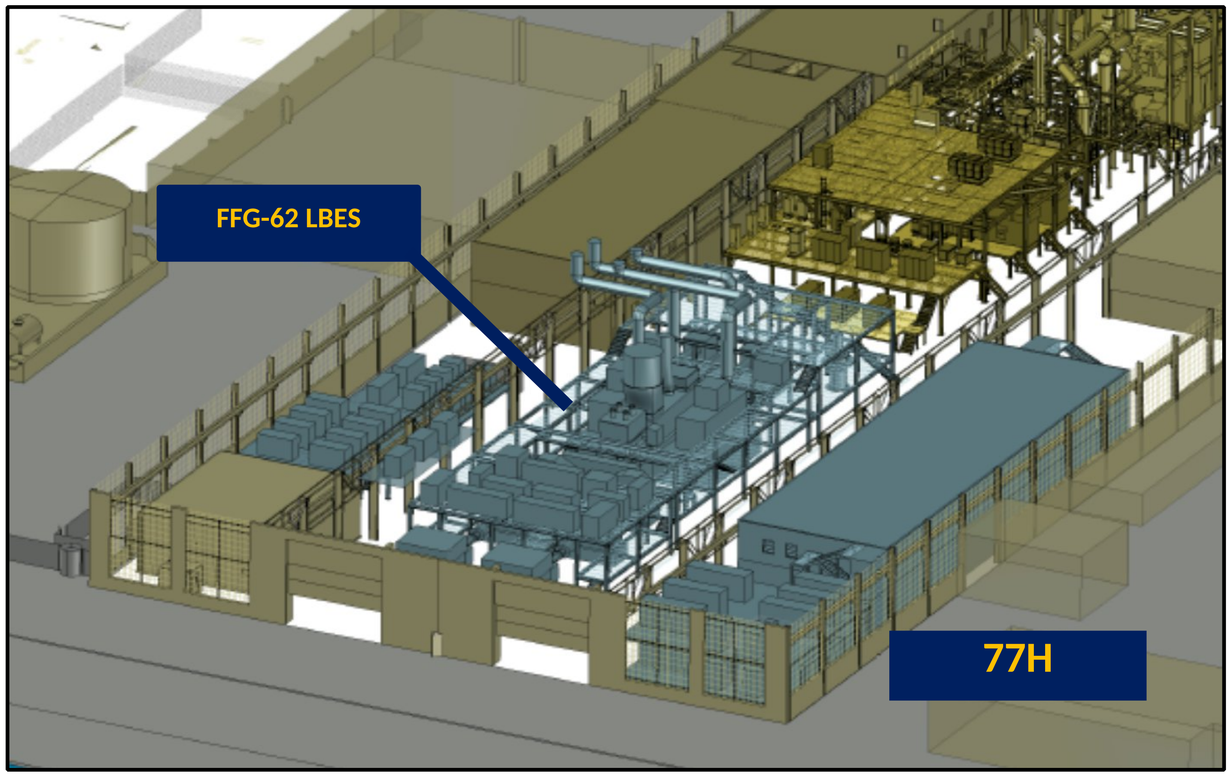
Combat Systems

Aviation

Propulsion Land Based Engineering Site

Current Execution Status

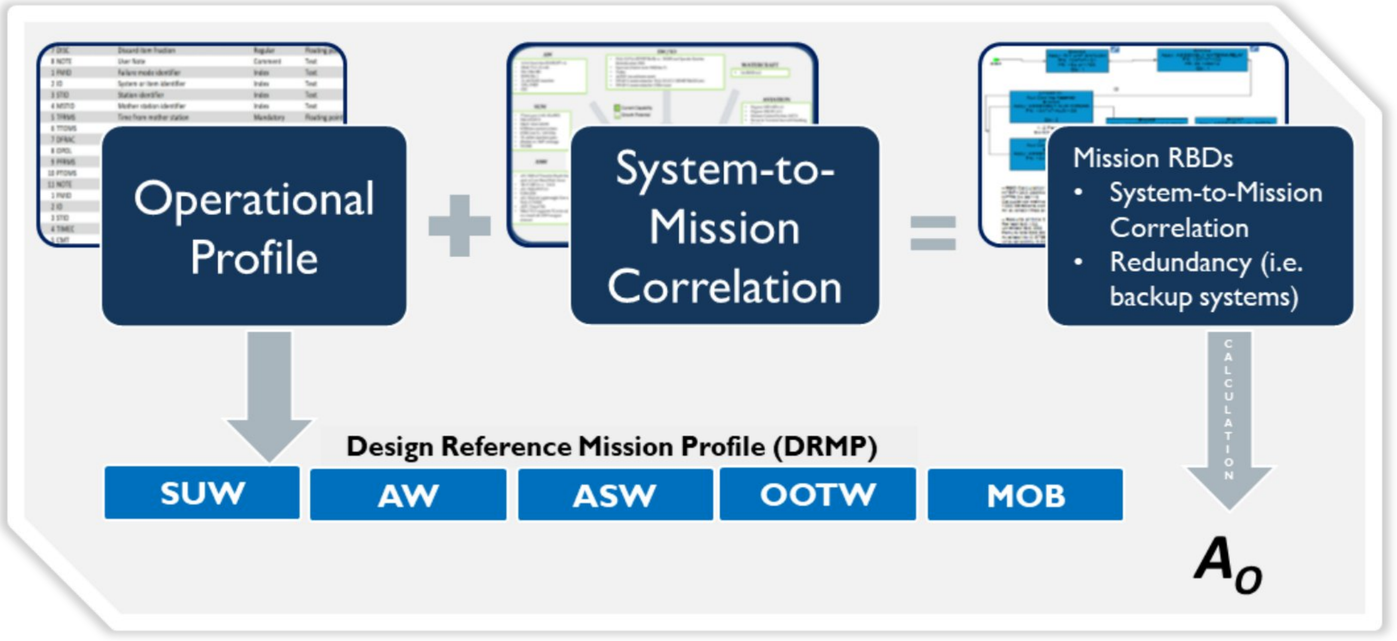
- ‘Ready to Test’ by 2026 prior to Lead Ship FFG 62 Delivery
- Early NAVFAC demolition award in 2023
- NSWC Philadelphia and NAVFAC renovation and outfitting schedules planned in 2024 and follow



Digital Shipbuilding from Design through Sustainment

- Sustainment considerations help drive the program's strategy
- Design engineering tools inform near to mid-term shipyard design, production, and test objectives
- Logistics engineering tools inform Navy long-range supply and maintenance planning, budgeting, and execution

Platform Design (3-D model and metadata)



Platform Performance (Frigate Readiness Assessment Model)

Program is leveraging digital tools and operating with the end in mind

Questions?

Backup

Acquisition Approach

Conceptual Design
Collaboratively incorporate U.S. Navy requirements into parent design

RFP

Source Selection -
Evaluate Best Value of proposed FFG(X)

Award

Detail Design & Construction
Validate FFG 62 meets requirements, develop production packages, build

Full and Open Competition

Capability Development Document → **System Specs**

Requirements

- Hull → [Lengthen]
- Accomodations → [Staterooms, change layout]
- Propulsion → [Maintain architecture, change equipment]
- Mechanical Systems → [Redundancy]
- Electrical Systems → [Redundancy]
- CS Physical Integration

Collaboration to inform Navy requirements to drive affordability and allow innovative solutions

USN Standar

Reliability | Survivability | Maintainability | Habitability | Lethality | GFE PoR

FFG(X)

FFG(X)

Functional Design

- Scale model testing and local structural updates
- Domestic sourcing of propulsion equipment (form, fit, function)
- Stable specifications since award
- Detail design to stable functional design

3D Model

- Digital Tools
- Tech Data Package

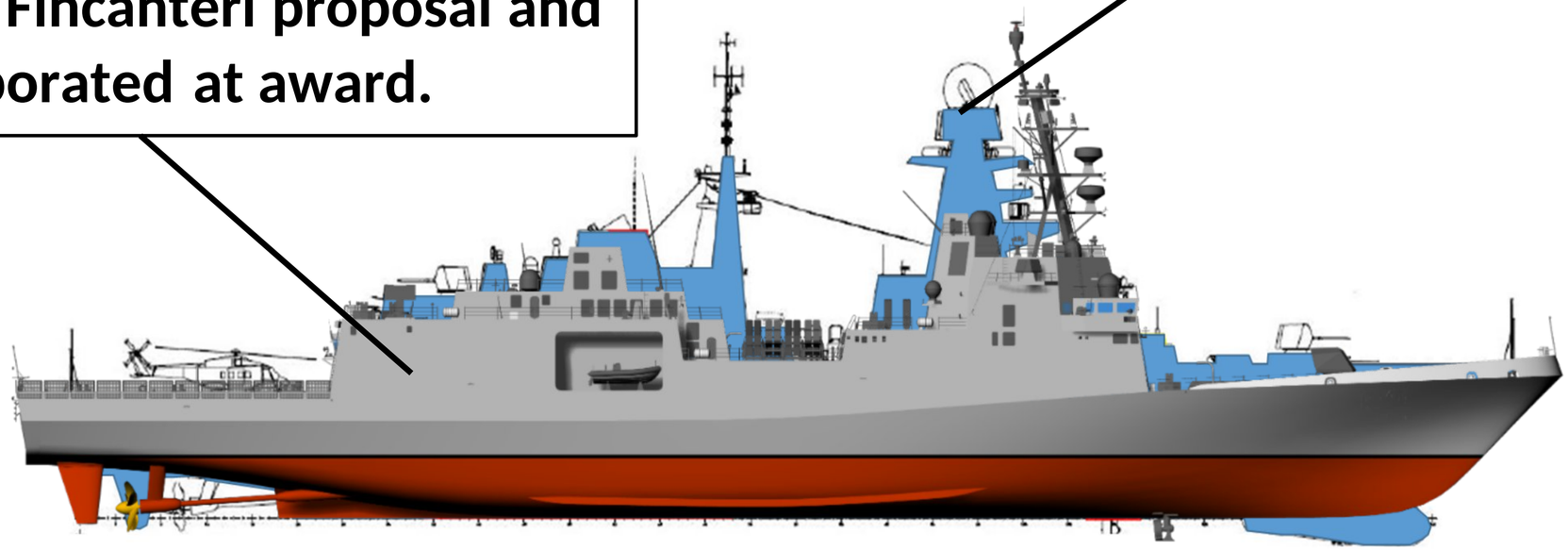
FFG 62 Class

Risk Reduction with Parent Hull
Key U.S. Navy Combatant Standards, Combat Systems, and C4I

FFG 62 Design vs FREMM Parent

FFG 62 requirements folded into ship design based off FREMM parent and were part of Fincanteri proposal and incorporated at award.

Parent FREMM silhouette (Blue)



- **Hull lengthened to accommodate larger generators and future growth**
- **Bow design modified to remove sonar dome and enclosure deck for stability**
- **Generator rating increased for transit speed and future growth**
- **Displacement increased for margins and future growth**
- **Topside modified to accommodate USN warfare systems**
- **Ship specification and equipment to US Navy combatant standards**